generating said mediator.

13. (Amended) The model of claim 12, wherein the step of reading said metadata comprises reading the abstraction metadata; reading the translation metadata; reading the database description metadata; and reading the mapping metadata.

14. (Amended) The model of claim 12, wherein the step of generating translation libraries comprises developing public and private class definitions and implementations of data structures.

15. (Amended) The model of claim 14, wherein said data structures comprise said abstractions and said translations.

16. (Amended) The model of claim 12, wherein generating the mediator consists of creating public and private definitions and implementations of a class or classes capable of receiving data in one format, converting it to another format, and loading it into a data warehouse.

17. (Amended) The model of claim 16, wherein said data is received by a receiving data structure defined within said translation library and said data is

loaded into a warehouse whose schema corresponds to the database description component of the metadata.

39. (Amended) The model of claim 35, wherein generating the mediator consists of creating public and private definitions and implementations of a class or classes capable of receiving data in one format, converting it to another format, and loading it into a data warehouse.

40. The model of claim 39, wherein said data is received by a receiving data structure defined within said translation library and said data is loaded into a warehouse whose schema corresponds to the database description component of the metadata.

41. (Amended) The computer-usable medium of claim 24, wherein said method is applied to data warehousing applications in the domain of protein sequence and structure analysis.

42. (Amended) The computer-usable medium of claim 24, wherein said method is applied to data warehousing applications in the domain of functional genomics and proteomics.

43. (Amended) The computer-usable medium of claim 24, wherein said method is used for integrating a new data source into a data warehouse.

44. (Amended) The computer-usable medium of claim 24, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

45. (Amended) The model of claim 32, as defined by the UML DataFoundry representation.

46. (Amended) The model of claim 37, wherein said data structures correspond to said abstractions and said translations.

47. (Amended) An apparatus for maintaining a data warehouse, comprising:

means for identifying a data source of interest;

means for updating a metadata to reflect information available from said source;

means for automatically generating a mediator based on said metadata; and

means for writing a wrapper for said source which calls said mediator.

48. (Amended) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of astrophysics and climate modeling.

49. (Amended) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of medical image processing and analysis.

50. (Amended) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of tracking consumer and customer preferences.

51. (Amended) The method of claim 1, wherein said method is applied to data warehousing applications in the domain of satellite and terrestial communication systems analysis.

52. (Amended) The method of claim 1, wherein said method is used for integrating a new data source into a data warehouse.

53. (Amended) The method of claim 1, wherein said method is used for updating a warehouse when a previously integrated data source is modified.

REMARKS

Claims 1-53 were presented for examination, are pending and are rejected. Reconsideration is respectfully requested.

Claim Objections

Claims 12-17 and 38-52 are objected to because of informalities.

The preambles of claims 12-17 have been amended as suggested.

Claims 38-52 have been renumbered to 39-53.

The preambles of claims 40-43 (old numbers) have been amended as suggested by the examiner.

Therefore the rejection should be withdrawn.

The 35 U.S.C. 103(a) Rejections

Claims 9 and 32 are rejected as being unpatentable over Knutson et al. The rejection is respectfully traversed.

Four types of information are represented by the metadata of the present invention: abstract concepts, databases descriptions, transformations and mappings. See page 3, lines 16-17. Specifically, the applicants' metadata as recited in claim 9 and 32 includes translations between two databases through an abstract construct. The translation is carried out with a mediator, which is a program which translates data between two formats. See page 3, line 8 through page 4, line 6. Knutson's approach uses metadata within a data warehouse and as the basis for generating reports and does

not include translations between two databases through an abstract construct. The reference does not include the metadata as described by the applicants. Therefore the rejection should be withdrawn.

Claims 1-8, 11-21, 23-31, 34-44 and 46-53 are rejected as being unpatentable over Knutson et al. in view of DeGroot et al. The rejection is respectfully traversed.

Independent claims 1, 9, 24, 32 and 46 all include the elements of a metadata and a mediator as discussed above. Neither reference discloses these elements. Therefore the rejection should be withdrawn.

Claims 10, 22, 33 and 45 are rejected as being unpatentable over Knutson et al. in view of Fontana et al. The rejection is respectfully traversed.

Claims 9 and 32 should be allowable over Knutson et al. as discussed above. Claims 19 and 22 depend from claim 9. Claims 33 and 45 depend from claim 32. Therefore the rejection should be withdrawn.

Conclusions

It is submitted that this application is in condition for allowance based on claims 1-53 in view of the amendments thereto and the foregoing comments.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings To Show Changes Made."